### THE STATE OF NEW HAMPSHIRE

### PUBLIC UTILITIES COMMISSION

September 3, 1998 9:10 a.m.

>>>>>TRACK 2<<<<<

Concord, New Hampshire

DAY III

RE: DR 97-171

> BELL ATLANTIC: Review of SGAT. (Hearing regarding Track 2.)

PRESENT:

Chairman Douglas L. Patch, Presiding

Commissioner Bruce B. Ellsworth Commissioner Susan S. Geiger

Mary Hart, Clerk

APPEARANCES:

Reptg. Bell Atlantic:

Victor Del Vecchio, Esq. David A. Schulz, Esq.

Reptg. AT&T Communications of New England:

Kenneth Salinger, Esq. Matt Schaeffer, Esq.

Reptq. Vanquard:

David Shulock, Esq.

Reptq. Residential Ratepayers:

William Homeyer

Office of Consumer Advocate

Reptq. PUC Staff:

Barclay Jackson, Esq.

Court Reporter:

Steven E. Patnaude, CSR

Samuel S. Gray, CSR



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### PROCEEDINGS

CHAIRMAN PATCH: Good morning. I'd like to reopen the hearings in DR 97-171. And, start the morning by taking appearances.

MR. DEL VECCHIO: Good morning, Mr. Chairman, Commissioner. Victor Del Vecchio representing Bell Atlantic. And, with me this morning is Stanley Baker and William O'Brien, as well as others.

MR. SALINGER: Good morning. Ken Salinger, for AT&T. With me, my colleague, Matt Schaeffer.

MR. SHULOCK: Good morning. David Shulock, of Brown, Olson & Wilson, P.C., for Vanguard.

MR. SCHULZ: Good morning. David Schulz, of Rogers & Wells, for Bell Atlantic.

MR. HOMEYER: Good morning. William Homeyer, for the OCA.

MS. JACKSON: Good morning. I'm Barclay Jackson. I'm here representing the staff of the Commission. And, I have with me representatives from the Engineering and Economics Department, as well as staff's consultant, Dr. Johnson.

CHAIRMAN PATCH: Okay. I think when we left off yesterday, Mr. Salinger, you were still doing your direct.

## THE CORBY GROUP

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MR. SALINGER: Yes. Ms. Petzinger had just begun her opening statement, and I would ask that she continue.

CHAIRMAN PATCH: Okay.

(Whereupon Catherine E. Petzinger

was recalled to the stand, having

been previously sworn.)

### CATHERINE E. PETZINGER, PREVIOUSLY SWORN

### CONTINUED BY THE WITNESS:

A Thank you. Okay. As I mentioned, the stipulation used a melded discount, in order to generate the SCIS results. And that, regardless of what numbers you use in that melding, what weighting you give, I mean, whether it's 80/20 or 70/30, it is truly inappropriate to use a melded discount in the SCIS. The SCIS model was originally developed to estimate the cost of a new switch, assuming that it was purchased and placed today. And, that is why there is only one primary discount input in that SCIS. If it was meant to be able to do both new and growth scenarios, it would have asked for two different inputs. It doesn't do that.

Now, in addition, of course, Bell Atlantic has agreed that it has not included growth equipment, and that's because SCIS is not capable of doing a new

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### [Witness: Petzinger]

and growth life-cycle type cost analysis. It is something called a "snapshot in time" model. And, almost all of the cost models that you're looking at today have that same type of methodology underlying them. An SCIS simply cannot do that type of costing.

Now, in SCIS, there are different categories of equipment. One of which is the getting started cost of the switch. Now, the getting started cost is defined as "that equipment that is purchased to get the switch up and running, regardless of the number of lines or number of trunks or the amount of traffic that's on the switch." So, it's truly just a first cost or getting started cost of the switch, and that is a fixed cost. It does not change over time. there to serve all of the traffic that will ever appear on that switch. Now, what happens is that first cost of a switch is always purchased with the initial installation of the switch. So, it will always receive, always should receive a new discount. you put a melded discount into SCIS, it now is going to apply that melded discount, for example, to this new switch getting started cost. Totally inappropriate, and just simply should not happen. And, this amount of this equipment is not inconsequential in the overall

### THE CORBY GRO

### [Witness: Petzinger]

scheme of things. It does represent at least 30 percent of each switch investment. So, that's a substantial amount of investment that's being inappropriately discounted, no matter how you define the melding.

Now, in my testimony, on Pages 16 to 18, I do discuss in detail why I believe a new switch price is the most relevant price for a TELRIC cost study, and I still believe this is the correct way to perform this type of a cost study underlying the unbundled network elements.

Now, in addition, the numbers that were actually used as part of this melding process, I also believe are incorrect. Although you can go through the contracts that Bell Atlantic has provided in this case and actually pick out those numbers from the old 1994 contracts, I don't believe they represent the forward-looking cost of switching that they are supposedly reflecting in this cost study. Now, more recent contracts that were provided do indicate significantly lower prices for switch equipment. The contracts also include a fairly large wide range --wide-ranging variety of terms and conditions that will

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further lower the price, that are not explicitly a discount off of list. So, there's other types of terms and conditions in these contracts that affect pricing that is not just discount-related. And, I could go into the specifics, but they are highly proprietary, and, so, to avoid going into closed session, I was not going to enumerate them here. But they can be found in the Exhibit 79A and B that were provided. If you would like me to go into them, I could.

Now, when reviewing the switch contracts data that we do have, in order to validate the stipulation numbers, it's important to keep the fact that TELRIC cost principles are part of this process. And, in a TELRIC cost study, the correct price is the cost efficient price of switches, not the embedded cost and not what they paid in the past. So, the idea of the "long run" principle in TELRIC means that Bell Atlantic is not limited to saying that "I've got this switch in place in this particular wire center, and what's the price of it". It allows them to vary what is out there. The only thing they have to keep constant is where the wire centers are located. They do not have to assert that a particular technology is in a given wire center. So, therefore, yesterday I know there was

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### [Witness: Petzinger]

a big discussion of the difference between the Nortel and the Lucent discounts, and whether or not they're equivalent. We don't even have to get into that kind of detail. Because, in one of the contracts in those Exhibits 79A and B, you will see a contract very explicitly that states what is the price of growth equipment on a flat rate per line. You don't have to worry about what the list price is or what a discount percentage is. It's just a number. And, that's a very clean way to look at it. Because that number also includes software, and it includes other features and functions as well. Now, it is true that that contract only exists for one vendor at this time. However, it is the most recent contract. And, it would be expected, and very reasonable to expect, that as these vendors compete on price, with the incumbent ILECs, that it would be very reasonable to assume that they're going to go back out and ask the other vendors for similar contracts and that kind of structure.

CMSR. GEIGER: Can you say with any degree of certainty what those discounts will be in the future? Again, we're looking at historical information, aren't we?

THE WITNESS: I would say that what

### [Witness: Petzinger]

you want to look at is the trending of the contract information. The older the contracts are, the lower the discounts. If you look at -- And the contract that was used yesterday, the contract that was used to discuss that embedded analysis, was a combination of a contract that we did not receive, because, apparently, it's out-of-date.

And, then, in addition, with the Megabid contract, it was signed in 1994. There are more recent contracts. If you look at those contracts, you will see the discount continuing to decline.

In addition, in the Northern Business

Information Report, they predict that switch prices have
been coming down about three percent per year. Those folks

track the central office equipment market, have been doing
so for a long time and considered an expert.

CMSR. GEIGER: I want to make sure the record's clear. You said the "discounts declined in the more recent contracts". You mean that the discounts actually increased?

THE WITNESS: Excuse me.

CMSR. GEIGER: In other words,

there are greater discounts and the overall price is coming down?

THE WITNESS: Yes. Exactly. I'm

sorry if I misspoke.

[Witness: Petzinger]

CMSR. GEIGER: Okay. Thank you.

THE WITNESS: Yes. The discounts are increasing, and the overall price declining. That's right. But the NBI substantiates about a three percent decline in overall prices, and a Dr. Houseman, on behalf of Pacific Telephone, recently put in some testimony that showed that, in his analysis of switching costs, that they're declining by eight percent a year. So, if you look at 1994 prices and apply either one of those ranges, you're going to see some quite significant decreases.

### CONTINUED BY THE WITNESS:

A The leading switch manufacturers, though, do provide almost essentially features and functionality. So that, typically, the only thing that they are competing on in the marketplace is primarily price. If you look across the country, the split between the two leading vendors ranges any, at any given time, between 40/60, 50/50, something like that. And, then, you know, reversing over to the 60/40, depending on what vendor you're referring to. And, that's because the RBOCs are trying to make sure that these vendors are competing against each other and they are getting the most efficient, cost-effective market-based price for these

### [Witness: Petzinger]

switches.

Now, Dr. Gabel's switch prices --

CHAIRMAN PATCH: I'd like to follow

up with one question, I guess.

THE WITNESS: Sure.

### BY CHAIRMAN PATCH:

- In thinking back on some of the testimony that's been offered this week in Exhibit Number 76, which is proprietary, and I won't ask specific questions, but we had seen there the actual costs for the switches.
- A Uh-huh.
- And, as I read that, I guess what you're essentially saying is we ought to ignore the older, if you look at the "service date" column there, we ought to ignore the older ones and look at the more recent ones, because you're saying the more recent ones are a more accurate indicator of what the actual cost of the switches is going to be. Is that fair to say?
- A Yes, I would say that that's true, with a reservation.

  As was mentioned, to be fair to Bell Atlantic, the only new switches are host switches. However, if you look at another situation, unfortunately, I just feel that this particular analysis is not a good one to start from. It is backward-looking, it is historical costs.

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## THE CORBY GROUP 1-800-255-5040

### [Witness: Petzinger]

None of these are terribly recent, and it certainly isn't a representative sample of the switches in New For example, all of these remotes, if you Hampshire. look at the line sizes on all the remotes that were purchased in 1992 and have 1992 prices on them, all those line counts are fairly small. Now, remotes are small switches, by definition. However, Mr. Baker even said that the average remote in New Hampshire, and I verified this in data that we had received as well, that the average size remote in New Hampshire is about 3,000 lines. None of these remotes have 3,000 lines on And, as you can see, they all start with around the same range of prices, regardless of what size they So, what happens is, when you go to a very small line size remote, the price goes up significantly. So that, if these were truly representative and were 3,000 lines remotes, none of these prices on this page accurately reflect the price for the average remote that's actually in New Hampshire today. mention, of course, the prices are old and should be -would be lower if you used current contract prices. So, I guess you're telling me that, number one, that the -- where it says "remote switches" there, the dollars that we see in Column 1 are higher than what

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they would be paying in today's market for the same kind of remote switch?

- And, when you express this on a per line basis, Α. in Column 9, they're simply taking Column 1, which is the total investment, and dividing by the number of lines. Now, if you look at all the remotes, the numbers are, in Column 1, are very similar. So, if you take one of those numbers and divide by the average of 3,000 lines, and I wish I had done the math, I'm not sure what that would come up to be on average, even using the old prices, that number, for the average remote in New Hampshire, is going to be substantially less than what you see identified as the "switch cost per line" in Column 9 for the remotes on this piece of paper.
- Q Well, then, what about Exhibit Number 87, where they, as I understand it, took the data from Exhibit 76 and made some adjustments to it, you know, did some weighting that tried to more accurately reflect the number of stand-alone and remote switches in the state?
- Uh-huh. Α
- And made some adjustments to those numbers, and, in 0 fact, ended up with a higher number overall. So, what's wrong with Exhibit Number 87 then?

### [Witness: Petzinger]

thought 87 took the sample that is in 76 and tried to adjust it, to reflect the fact that those numbers perhaps could be skewed, because they were, you know, because they had more remotes than are reflected in the state or more stand-alones than are reflected in the state.

A Uh-huh.

- I thought some adjustments were made on Exhibit 87.

  And, in fact, when you make those adjustments, it goes in the other direction than I'm sure what you would like to see it go.
- A Yes.
  - Q So, what's wrong with 87?
- 14 | A Exactly.
  - Q And, maybe you were going to get to that anyway, though.
  - A Yes. There's a lot of things going on in 87. I think the first thing we have to do is take a look at the top lines, where they show what the starting number is that they're starting with, which is the stand-alone number and the remote number, and these are dollars per line.

    Okay? Those starting numbers are not adjusted for any weighting or anything. This is before that. These are supposedly the numbers, just as averages off of this

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### [Witness: Petzinger]

page, as I understood it. And, what I'm saying at this point is that, especially the remote number, and is this remote number proprietary?

- I don't think so.
- Then, should I say it? Am I allowed to --
- Exhibit 87, as I understood it, the only thing that was 0 proprietary was that "Mega" and "Bid 90" box, --
- Α Okay.

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- -- sort of right on the page off to the right.
- So, the remote number of \$333, I'm saying that this whole analysis, which is an attempt to validate the 325 number that was arrived at from a different process, that that number right there, that's starting off the validation, is too high, by a large amount.
- 0 Why?
- Okay. This is the cost of the -- this is supposedly the average switch price per line for the remotes from Exhibit 76, right?
- Q Right.
  - Α Now, and what I'm saying is that that number was derived from this data, the 333.
    - And you're saying -- And just to paraphrase what I heard you say before, you're essentially saying that the remotes that were used as examples had too few

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[Witness: Petzinger]

lines on them, so that they weren't representative of sort of the average for a state, for the state, in terms of the numbers of lines served by a remote?

- Α Exactly. So that --
- 0 So, the cost per line is higher than it should be?
- Much higher. Yes. The lines, I mean, you can see for Α yourself that the number of lines on these remotes, there are large numbers of them that are much, much smaller than the 3,000 line average. And, then, of course, we got a couple that, you know, with the other issue that you had mentioned earlier, too, these are also based on old prices that have not been adjusted, as I understand it, in any way on this piece of paper. So, I mean, what he's done on this piece of paper, I think, to be honest, is that they have attempted a validation of their embedded costs, and have done a reasonable job. But the point is, embedded costs are not what is relevant in this proceeding. We're trying to get to what is the forward-looking cost of switching.

The reality is, what we're trying to do here is set up pricing similar to what would be occurring in a competitive market, and the way to simulate that is "What would the new entrant face? What would it cost

### [Witness: Petzinger]

them to place new switches?" And, that should be the benchmark for the pricing of the unbundled elements.

So, the old embedded data simply, not only do I think it does not necessarily accurately represent even the embedded data, because it doesn't have the right number of lines compared to today's switches, but it simply it represents old dollars and old technology as well. The newer technology has more capacity typically, resulting in lower cost.

### BY CMSR. GEIGER:

- Ms. Petzinger, I want to remember or remind myself of what your earlier testimony was with respect to the 3,000 line figure, as it relates to the cost of a remote switch. Is it your testimony that 3,000 is the average number of lines associated with a remote switch in New Hampshire? Is that what you're saying?
- Yes. I verified that myself, when I looked at the data that was provided, and Mr. Baker also mentioned I think the term -- the number "3,100 lines" yesterday was the average. So, we're in the same ballpark. There's probably a slight difference in vintage of the data there that explains the difference.
- Q Okay. So, just to recap, you're saying that, because none of the remote switches that are identified on

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### [Witness: Petzinger]

Exhibit 76 are above 3,000 or around 3,000, that those figures are too high?

- Α That, plus the fact that it was old contract data.
- 0 Okay.

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For all of the remote data was the 1992 data, the year Α 1992.

> CMSR. GEIGER: Thank you.

### CONTINUED BY THE WITNESS:

Going on, to try to find out what are the benchmarks for some forward-looking switching, as opposed to focussing on the backward, Dr. Gabel's data, that was cited by Dr. Johnson, I think also corroborates that, not only was the original \$700 approximately per line in the original switch study too high, but the \$325 agreed to in this proceeding, the stipulation, excuse me, is too high. Now, Dr. Gabel's data is obtained from switches across the country, and there was an issue of whether or not that data should be used here in New Hampshire. And, what I'd like to do is share with you some information that I found out from the data provided. New Hampshire's host and stand-alone switches, now these are hosts without the remotes, I have not been able to investigate the data to find out what the host plus its remote line counts

### [Witness: Petzinger]

are. But, if you just look at the host and the stand-alone switches, in New Hampshire, they are averaging 25,000 lines. That is a reasonable size switch. Granted, it doesn't compare to downtown Manhattan switches. But the switches across the country, also in Mr. -- Dr. Gabel's study, don't look like downtown Manhattan. Some of those may be in there, but that doesn't mean that that represents the average. The average is very similar to what we see in New Hampshire.

Now, in addition, New Hampshire has a very, very large number of remote switches. When you merge those together, the kinds of numbers you heard yesterday about the average number of lines per switch appear very low. But, in reality, remotes are a very efficient way to provide service in a forward-looking network. The high ratio of remotes in New Hampshire, to me, tells us that there is a reasonably efficient network architecture deployed throughout New Hampshire. And, the fact that these remotes are operating at approximately 3,000 lines, that is also a very efficient use of remotes. Typically, you will see something that they will, although it's not the absolute capacity, but usually you won't see them

### [Witness: Petzinger]

operating at more than 4,000 lines. So, they are operating at very good, efficient levels, meaning that the costs of these remotes should be very reasonable.

Now, all these factors, both the large host switches and the efficient use of the remotes, contribute to what I consider to be a cost-effective switch deployment in New Hampshire that is comparable to other RBOCs used in Dr. Gabel's study. Now, what I did was I took Dr. Gabel's study, which consists of a fixed plus a variable cost per line for each switch, and I applied it to the switches in New Hampshire.

And, what I came out with was a total installed cost of \$146 or \$156. Dr. Gabel actually has two sets of data in his study. But that was the range.

### BY CHAIRMAN PATCH:

- Q How did you arrive at that figure again? You just described it briefly, if you would just --
- A Okay. Yes. Dr. Gabel's data consists of a fixed cost for each switch, and he has a different fixed cost for a host versus a remote. And, obviously, a remote has a very small fixed cost, compared to a large host switch, and then you've got a variable cost per line. So, because I knew how many host switches there are, how many remote switches there are, and how many lines on

### [Witness: Petzinger]

hosts and how many lines on remotes, I was able to just do the math, multiplying all that out, and come up with the total investment and divide by the total number of lines. And, it works out to be between 146 and 156, depending on which set of Dr. Gabel's data I used.

Now, if we compare that to 325, which is the direct comparison, again, it's severely overstated, the \$325. Now, the price for switch equipment paid to the vendor, as is clear from what you've heard so far, is only one part of the total installed cost of a switch. And, what I'd like to do is review each component and highlight where the Bell Atlantic stipulation still reflects overstated costs. Maybe the easiest way to do this would be to refer to, in Exhibit 62, it was approximately the seventh sheet back, and it was labeled "New Hampshire - Switch Results Filed Versus the Stipulation".

CHAIRMAN PATCH: You said the seventh sheet, was that?

THE WITNESS: About the seventh sheet back, right, in Exhibit 62.

CHAIRMAN PATCH: When you say "back", you mean from the --

THE WITNESS: From the front, yes.

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[Witness: Petzinger]

It's unnumbered, unfortunately. But it looks like this (SHOWING DOCUMENT). It's labeled "New Hampshire - Switch Results Filed Versus the Stipulation".

CONTINUED BY THE WITNESS:

Okay. If we look at the first line, it's labeled "SCIS Results", now, that is where the issue of the discounting and all that comes into play, as to what inputs you put into SCIS and what outputs you get. that is one number. And, I've already talked extensively about that that number, as it stands today, even with the 80/20, you know, discount applied, that that number still is too high, compared to the publicly available switch price information that I did include in my testimony from other RBOCs around the country. I've also, I think, talked about the fact that this number is too high because the -- Dr. Gabel's data doesn't support it, nor does the contract data. And, it certainly doesn't represent the cost, forward-looking cost of new switches. Now, just so you know, that SCIS result on a per line basis is the number at the bottom of the page, which is the "cost per line material". So, we've already talked about why I believe that number is too high.

The next thing I'd like to talk about is the

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### [Witness: Petzinger]

installation factor, which is third item down, at "1.5211", or approximately a 52 percent installation factor. Now, in my testimony, I had shown a comparison of other factors for installation, from Bell Atlantic South states, it was on Page 13 of my testimony. Now, Mr. Baker did mention, and he is correct, that the Bell Atlantic South states represent what they call "local engineering and installation factors", and they averaged about ten percent overall and 11 percent just for the Bell Atlantic South states, because I did have some other companies in there. Whatever was available These are not a selective listing. I included. was everything that was filed in an Open Network Architecture filing at the FCC in approximately 1992. So, those are the engineering and installation costs incurred by the local telephone company, averaging about ten percent. Now, the 52 percent --

### BY CHAIRMAN PATCH:

- Q You've told us that '92 figures are old, --
- A Yes.
- Q -- in terms of switch costs. Are '92 figures old, in terms of installation costs, too?
- A Yes. I still think that it serves as a handy benchmark. I'm not saying that those are the right

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### [Witness: Petzinger]

numbers, though.

- Which way have they gone since then? 0
- There's puts and takes on that. Bell Atlantic would Α tell you, "well, their installation costs are going up because of their labor costs are going up." But I would also say that some of that is offset by productivity gains that they should be experiencing, as, you know, things become easier. I know that the vendor has implemented new processes within the switch to make cutovers easier, faster, less problematic, both from a service perspective and also from a time to installation perspective.

### BY CMSR. GEIGER:

- And, the ten percent figure that you just gave us 0 relates, did you say, to the southern states within Bell Atlantic or is that BellSouth?
- Did I say "BellSouth"? I'm sorry. Southern Α states within Bell Atlantic.

CMSR. GEIGER: Thank you.

THE WITNESS: Yes. And, the states

are identified there by name, in my testimony.

### CONTINUED BY THE WITNESS:

Now, the 52 percent factor, however, here, includes both the local telephone company installation and

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engineering and vendor engineering and installation. At the time I filed my testimony, I did not have any information to be able to break those things down so that I could do a direct one-to-one comparison. But, from my experience, I knew that the -- the additional engineering and installation that would normally be provided by the vendor anywhere else in the country, but done in-house here in the Bell Atlantic North territories, is that that would not explain the difference. But, at the time I filed my testimony, I didn't have the information. So, now, what I did was I went back and I said "okay, I'm going to run SCIS." has a toggle switch, without changing anything that Bell Atlantic provided to me in the SCIS electronic I changed no inputs, no data, nothing. version. simply took it as provided. There's a simple toggle switch, and it says "Run material only", which is the way NYNEX, or excuse me, Bell Atlantic ran it, or you can run it with including vendor engineering and installation, it's called "EF&I run". I simply hit that toggle and recalculated everything that they provided me. That shows that there was an 8.4 percent cost that SCIS would calculate for vendor engineering and installation. So, if I simply round up to ten

### [Witness: Petzinger]

percent, and if I add that ten percent for the vendor engineering and installation to the ten percent in my testimony that shows the local telephone company engineering installation, the total amount becomes 20 percent. That is a direct comparison to the 52 percent that they are attempting to use in this proceeding.

And, it just shows that it's just severely, severely overstated.

Now, I'm not saying that they don't actually have incurred that cost in the past. What I'm saying is that, if that is not a cost-efficient, effective way to run a business, then, on a forward-looking basis, the new entrant shouldn't have to pay for that inefficiency.

In addition, the fact that Bell Atlantic, in the southern -- the pre-merger Bell Atlantic states all do engineering and installation from the vendor. And, if you assume that going forward the companies are going to attempt to do best in class for identifying how to run their business on an integrated basis in the future, I would think they're going to go for the most cost-efficient way of doing it. And, that would make sense. There's no reason to continue to pay more than necessary for that process.

### [Witness: Petzinger]

The next thing I'm going to talk about is the right to use fees, which are listed here. And, they are substantial. When you convert those totals to a simple per line number, it comes out to be about \$38 per line for the software that they have included as capital investment in this study. Now, we did request data on the accounting documentation of precisely how all of these dollars were booked to the accounts, and we have not received it. We did have another data request where we asked for an example of how one switch's RT fees are booked. We did receive that, for some inexplicable reason we were provided information about a New York State switch, and it had no numbers of lines associated with it, so we couldn't really determine how that equated to anything here.

I still believe, as I mentioned in my -- in my testimony, and as I think was shown yesterday in some of the discussion, that double counting of right to use fees has probably taken place here between the expense and the capitalization accounts. If it was included in the expense accounts, which Bell Atlantic has said that they have not adjusted in any way, and then also included those here as capital dollars in the cost study, there will be a double count. Now, many of

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### [Witness: Petzinger]

these dollars, we did receive from Bell Atlantic a listing of what the dollars are. Again, we did not receive the accounting information, but we did receive a listing of what represents these right to use fees, and many of them are associated with buyouts. And, yesterday, I think you heard that many of the buyouts are definitely expensed.

Okay. I'd just like to quickly draw your attention to the ISDN port rates. They are completely out of proportion to the other port rates. When I -- I think the first reason is, again, a discounting problem within SCIS, the wrong discount was used. There is often a separate ISDN specific discount, or contract even, an entire contract that governs ISDN purchases, because the vendors have been aggressively trying to incent deployment of ISDN. And, I did not see that kind of a discount reflected in these studies. None were near the order of magnitude I would have expected.

The other thing is, the inputs for SCIS for the ISDN traffic patterns did not appear reasonable to me, and they used surrogate data. They sort of assumed that a little bit of ISDN data represented all of it.

And, I thought that the inputs were inappropriate.

And, then, to use them across all of -- as surrogates

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### [Witness: Petzinger]

for all of the ISDN inputs just was not -- was not It caused absolute massive amounts of spare capacity to be calculated and included in the cost here. And, that means, as new ISDN customers come on board, that double recovery will occur, because they're charging us here, in the form of spare capacity, and, now, when those ISDN customers do come on board to use up that spare capacity, those ISDN customers will also be paying for that same equipment. So, it will end up resulting in double counting, or "double recovery", let me put it that way.

Just as a rule of thumb, typically, when ISDN first came out, it was touted as being something that would -- should be less than twice or two home lines, otherwise it would never sell. And, the rule of thumb was about one and a half times the cost of a typical analog POTS line. Instead, what we're seeing here is 20 times higher. And, I would say a reasonable range should only be in the two to three times level at most.

Now, the only remaining things I'd like to talk about is the fact that that very large fixed cost of a switch, that 30 percent of the investment is fixed, it does not vary with respect to usage, and yet that is being recovered on a minute of use basis. And,

### [Witness: Petzinger]

it's being recovered over current minutes. That means that, as the minutes grow in future years, but that fixed cost remains the same, they will begin to overrecover that fixed cost with each additional minute that they receive in the future in traffic. And, that's inappropriate.

In addition, today, the reason you incur that fixed cost is because of a port exhaust. If you exhaust the number of ports on a switch, the number of lines, for example, that will require you to place a second switch in that -- in that wire center. That is what causes you to incur an additional investment.

Minutes do not exhaust a switch any longer. That's an historical perspective and it's no longer true.

And, lastly, the electronic version of SCIS that was provided by Bell Atlantic, when I first received it, I opened up the model. I simply looked at the report. I touched nothing. I just viewed the stored reports that are in there. Those results matched none of the results that have been provided in the filing. I then thought "well, maybe it needed to be recalculated." Again, I touched no inputs, I pushed the recalculation button. The number was lower than what the number was that they provided me, in the first

### [Witness: Petzinger]

version or the initial report that was shown. In fact, if you refer back to this Exhibit 62, the seventh sheet, showing the switch results filed versus the stipulation, that bottom line, that "SCIS cost per line material" is shown as "163". The data I received in the electronic version, by simply pushing the recalc button showed "146".

Now, I'd like to reemphasize, though, I do not think "146" is the right number, because that is material only cost, and represents this weighting of the 80 percent/20 percent of new and growth discounts. Again, I think the 146 should be the fully installed cost, not the -- not just the material. But it just shows that the bottom line is we're not sure how the numbers in the workpapers were generated, because the documentation we've received to date does not validate them or substantiate them.

So, in summary, we do recognize a huge reduction is taking place in this stimulated switch rate, compared to the initial filing. But a huge reduction does not make them correct, nor does it make them cost-based, which is a requirement, UNE rates must be cost-based. I mean, if a car salesman's first price for a ten year old Chevy is \$50,000, reducing it to

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\$25,000 does not make it correct. And, yet, that is exactly what's happening here. And, should this Commission reject the preferred HAI model, in favor of the stipulation, then there are numerous modifications that would be necessary to make it cost-based. nontraffic sensitive first cost of a switch should be allocated to and recovered from ports, not the minute of use.

Forward-looking Integrated Digital Loop Carrier technology, which is the Bellcore compliant GR303, also known as "Next Generation DLC", is currently available, and is being deployed today. should be included in the cost study for the digital line ports. They have substantially lower costs than some of the Digital Loop Carrier that they have included in the switch port study. The engineering and installation factor must be reduced to realistic levels. And, most importantly, the discount inputs to SCIS should reflect the new switch prices, they must reflect the most cost-effective, forward-looking cost of switching, and certainly should not exceed Dr. Gabel's fully installed cost of \$146 too \$156 per line.

And, that concludes my summary. Thank you.

MR. SALINGER: If the Commissioners

### [Witness: Petzinger]

have no further questions, then Ms. Petzinger is available for cross-examination.

CHAIRMAN PATCH: Okay. Ms.

Jackson.

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MS. JACKSON: Commissioners, at this point, because the summary involved a lot of new material, staff would request we take a recess for at least 15 minutes, so that staff can consult with each other and decide how to proceed.

CHAIRMAN PATCH: Okay. We'll take a fifteen minute recess.

(Whereupon a recess was taken at 9:55 a.m. and reconvened at 10:19 a.m.)

MR. DEL VECCHIO: Good morning, Ms.

Petzinger.

THE WITNESS: Good morning.

### CROSS-EXAMINATION

### BY MR. DEL VECCHIO:

- Q Why don't we start by having you explain to me your notion of what a TELRIC method should employ. Is it your testimony that pricing should be forward-looking?
- A Well, I'm certainly not an economist, but I can speak from my understanding of how you implement TELRIC

### [Witness: Petzinger]

principles into the cost study. And, yes, I would say it should be definitely forward-looking.

- Q I see. So, you're not an economist?
- A No.

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- Q And, you're not an engineer?
- A No.
  - Q And, your background was in the area of political science, is that correct?
  - A Yes. My undergraduate degree was a Political Science major. That's good for everything, I think, though.
  - Q In fact, I was a Political Science major as well.

CMSR. GEIGER: Well, let's all hold

our hands up.

### (Laughter.)

### BY MR. DEL VECCHIO:

- Q But, unfortunately, I'm not an engineer, nor am I an economist, as I take you are not as well. With respect to the forward-looking currently available technology approach, which I believe you espoused is the appropriate way to proceed with a TELRIC study, do you agree that it would be appropriate in the TELRIC method to use the SCIS model?
- A In this proceeding, SCIS can be forced to produce numbers. SCIS was not built to generate unbundled

### [Witness: Petzinger]

- network elements. It can be manipulated to do so. It is not an ideal use of the model.
- Q It can be used to produce forward-looking costs, is that correct?
- A Yes. I would say that it can generate switch investment that's forward-looking, that's right.
- Q And, that result would be TELRIC compliant, is that correct?
- A I'm not sure. The outputs of SCIS at that point don't represent an "element" as defined in this proceeding, or at least the element -- rate elements of port and usage, SCIS does not generate the numbers in that format. So, I can't say it's pure TELRIC compliant, because other things have to be done to --
- Q Sure. I'm sorry.
  - A -- to put them in the right format.
  - Q I understand that. But I'm not talking about rate design right now, Ms. Petzinger. I'm talking about the switch investment producing a forward-looking cost number.
  - A Yes.
  - Q Is it your testimony before the Commission that SCIS will produce, can produce a TELRIC compliant switch investment number?

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#### [Witness: Petzinger]

- I agree it produces a -- it can produce, depending on the inputs, a forward-looking switching investment. I'm not sure whether the numbers that come out of SCIS as is are TELRIC compliant.
- The numbers, and that's because you have to then assign Q those costs to various rate design buckets, is that correct?

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- Right. But, I mean, in this case, my understanding, Α those rate design buckets are the definition of the Now, "element" is part of the "TELRIC" definition. So, if it can't do -- if it doesn't come out with the elements directly, then I'm not sure it's TELRIC compliant. I mean, we may be just arguing over terminology.
- Q Right. I'm only --
- Α And, I do agree with you that it's forward-looking, and that it can do long run costing.
- Okay. Thank you. And, in fact, that would reflect the 0 SCIS results component, which I believe you spoke about earlier on the page from Exhibit 62, and once we took that number and adjusted it with various factors, such as power, we would then turn to a rate design method, such as Attachment 1 to the stipulation, and would produce a rate --

- Okay. You're way ahead of me now. Α
- 2 Okay.

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- 3 I need to go back to Exhibit 62, which is?
- Sixty-two you were reading earlier. 4
  - Oh, I'm sorry.
  - Identifying various columns. Starting with SCIS Q results.
    - Α Right.
      - Are you with me?
      - In a second here. Yes. Okay, I got 62.
      - Q And, the SCIS results above, assuming the correct inputs, can produce, I believe you testified, a forward-looking, TELRIC compliant investment figure, which then, of course, must be bucketed to various rate design components or elements, correct?
      - Α Well, again, I want to not necessarily agree with you. You're asking me "is that number TELRIC compliant?" And, I don't believe that that number represents any element that we're talking about. It is -- It can be, depending on inputs, and I'm not saying this number is, because it definitely is not, SCIS can produce forward-looking long run costs.
      - Okay. And, then, one would take those costs and make Q adjustments for things like power, correct?

		}	
)	1	A	Yes.
<b>_</b>	2	Q	And RTU fees?
	3	A	Yes.
	4	Q	And similar such adjustments, and then we would seek to
	5		bucket those to various elements, is that correct?
	6	A	Yes, that's right.
same <sub>g</sub> ersyr	7 8	Q nana ma	And, in fact, did the parties, that is staff and Bell Atlantic, seek to bucket, if you will, various costs in
	9		Attachment 1 of the stipulation, which has been marked
2	10		for identification as Exhibit 61, I believe? Did they
4000 6 1000 7 1000 8 10	11		seek to do that?
Š	12	A	I don't have that in front of me, but they're certainly
)	13		attempting to generate prices for switch elements.
040	14	Q	Yes.
	15	A	The various elements that have been defined here, yes.
<u>-</u>	16	Q	For the purpose of establishing unbundled network
	17		element prices, correct?
	18	A	That was my understanding.
	19	Q	Now, getting back to the issue of TELRIC pricing, some
	20		of your criticisms in your direct testimony, I take it,
	21		were based on the notion that some of the costs that
	22		Bell Atlantic identified were not forward-looking, is
	23		that correct?
)	24	A	Yes, that's correct.

#### [Witness: Petzinger]

- Q And, in fact, in one case I believe you claimed that the switch characteristics were not forward-looking, is that right?
- A You'll have to be more specific, I'm sorry.
- Q Well, did you initially, I believe, testify, in your prefiled testimony at least, that the Company modeled three hypothetical switches for purposes of determining switch investment? And, I know that you've since revised that on the stand, is that correct?
- A Yes, I took that out because, as Mr. Baker stated the day before, that the information that was filed, one could reasonably conclude that only three switches were -- of data were entered. And, after I received the SCIS model, it became evident that more than three switches were done. And, so, I --
- Q And, in fact, didn't -- I'm sorry.
- A -- and that's why I retracted that information from my testimony yesterday.
- Q In fact, didn't Mr. Baker say that in his surrebuttal testimony as well?
- A Yes, I believe he did.
- Q And the reason for identifying actual switching information, why is that?
- A What information are you referring to?

- Q Well, why are you criticizing, initially at least, Mr. Baker?
  - A Well, for the fact that they didn't include more than three switches?
  - Q Yes.

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- A Because you want to be able to identify the cost associated with current demand. I mean, that is one of the issues here. And, the inputs to SCIS are supposed to reflect current demand. My first impression of only three switches' worth of inputs would not necessarily be able to represent all of New Hampshire's demand.
- Q Okay. So, what you're trying to determine then is the actual line counts, for example, among other things?
- A Well, you would want to be able to determine line counts per switch.
- Q I agree.
- A Or the minute of use rates or the number of trunks for the number of lines being served. There's many, many inputs into SCIS --
- Q Sure.
- A -- about traffic patterns for each individual switch.
- So, what you need to look at, in order to produce a reliable SCIS result, which would be forward-looking, is to have, for example, actual lines per switch,

correct?

A Yes, tha

- A Yes, that's right.
- Q And actual trunks per switch?
- A That's correct. Well, let me back up. That data, you're saying "actual", assuming that it was collected very recently and reflects, you know, what is currently happening in the network.
- Q Sure. What happened in the network, in fact?
- A No. I was saying the idea is it's supposed to reflect current demand.
- Q Current demand, though, based on what actually happened, isn't that correct? Or should we have made up the numbers?
- A No. I'm saying, whatever the current demand is should be what is input. If you're trying to capture the cost of the network for -- or a network to serve current demand, you better capture current demand. That's all I'm saying.
- Q But those are actual numbers, aren't they? Or are they hypothetical numbers?
- As long as they're as of today. Now, there are some hypotheticals in the inputs that would have to be made. For example, if you have analog trunking in the network, that would not be appropriate for a

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[Witness: Petzinger]

forward-looking study. That's a very simple one.

- Q All right. I understand. But you struck your testimony yesterday, I believe, in part, because you now understand that Bell Atlantic did use actual numbers, and those numbers I believe were dated as of December of '97, is that correct?
- I don't remember the date. I didn't strike it because Α they didn't use actual numbers.
- You struck it because they, in fact, did use actual numbers, for all switches, which you thought they had not, isn't that correct?
- No, I'd like to not agree with the wording that they Α "used actual numbers". I'm just -- The reason I struck that was I thought they were only trying to represent current demand based on three switches, and that turned out not to be true, so I modified my testimony appropriately.
- Q And, the fact that they used current demand for all switches, as of December of 1978, was sufficient for you to have a comfort level -- I'm sorry, '97, thank Was sufficient for you to have a comfort level that, at least in this part, the SCIS model could produce a reliable result, correct?
- No, I again object to the way you're characterizing Α

that. What I said was that testimony that said that "they only reflected three switches' worth of data" was no -- I identified was no longer correct. more switch data. That's all I was saying.

Q So, --

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- You're drawing much more into it than I ever said.
- Q I see. So, you still have criticisms with respect to that particular element then?
- Α Which element is that, sir?
- 0 The issue of whether or not they have used forward-looking traffic characteristics in those switches. Because I believe that was the purpose of your testimony on that part, was it not?
- Α No. Again, --

MR. SALINGER: Objection. That's a compound question. If the Witness could have one question at a time.

MR. DEL VECCHIO: If the Witness doesn't understand the question, I could repeat it.

THE WITNESS: Could you break it up

into two?

BY MR. DEL VECCHIO:

I want to understand whether or not you were objecting to something in addition to your objection that Bell

#### [Witness: Petzinger]

Atlantic allegedly used three hypothetical switches, with respect to that particular section of your testimony?

- As that was the only data I had in front of me at that time, for those three switches, I had no knowledge whatsoever of whether the data was valid or not. And, yes, I do have additional problems with some of the input data, as I mentioned in my summary, regarding ISDN, regarding the lack of line ports that reflect forward-looking Integrated Digital Loop Carrier, and number of other things.
- Q Okay. Let's see if we can wrap this up, though. With respect to the issue of whether Bell Atlantic used hypothetical data for switches in New Hampshire, versus the use of actual data, you are now satisfied that Bell Atlantic used actual data, and that was the correct thing to do in this instance, isn't that the case?
- No. I really don't want to belabor this. The issue is, I am not saying that the data that they used for the inputs are actual. I have no way to verify that, I have no knowledge of whether they're actual data. Some of the inputs appear reasonable to me, not all of them. The only difference that I was saying was that "do three switches represent all switches in New

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# [Witness: Petzinger]

Hampshire?" And, the answer to that was "no". I still have problems with some of the input data.

- I understand that. But you understand that the data Q used was not hypothetical data, is that correct?
- Some -- The ISDN data, some of which it may have been Α collected for a number of switches, was then used as surrogate data for other switches. I'm not sure whether that falls into the realm of hypothetical. And, to be honest, I have no knowledge whatsoever of whether any of the data entered into those models were hypothetical or not. I don't have any of the documentation underlying those inputs. I cannot validate that.
- O Well, let me ask you it this way then, before we move To the extent that the Company used actual switching characteristics for each of the switches in New Hampshire, as of December of '97, that would have been correct, correct?
- I'm not sure what you're asking me. Α You want me to agree with --
- With what I just said.
- With -- based on your testifying that they were actual Α data, --
  - No, that's not what I --0

-- I should --Α 1 2 That's not what I asked you, ma'am. 3 I'm sorry, could you repeat the question. 4 MR. DEL VECCHIO: Could you please read the question back. 5 6 (Whereupon the Court Reporter read 7 back the question.) BY THE WITNESS: 8 I'm sorry, I still don't know -- I'm not sure what 9 10 you're asking me. BY MR. DEL VECCHIO: 11 I asked you whether, if they had used current -- I'm 12 sorry, actual data, as of December of '97, then that 13 would alleviate your concern that they used 14 15 hypothetical data? 16 Α No, because, as I said, the ISDN data that was used --17 I'm not asking specifically what they did. I'm asking Q 18 you, to the extent that they did? No, I still can't agree. Because, if they used analog 19 Α trunking, for example, as inputs, that would be 20 incorrect, even if they actually exist in your network. 21 22 Q Okay. Well, let me ask you this then. Given that time always passes from data gathering to the point of 23 24 hearings in any proceeding, isn't it correct that data

{DE 97-171} [Track 2 - Day III] (9-03-98)

[Witness: Petzinger]

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# [Witness: Petzinger]

is necessarily historical?

- A Yes. I would say that, as long as it's within some reasonable time frame, though.
- Now, I believe you also claimed today, and earlier in your testimony, that the Company used the wrong discount when entering inputs into the SCIS model, is that correct?

- A That's correct.
- Q And, the right discount is what, without identifying any specific number?
- A I believe it should be what most accurately reflects what would be the forward-looking cost of switching that is generally available in the industry for new switches.
- Q And, that would be determined by looking to see what most recently the telephone company actually paid, is that correct?
- A Not necessarily.
- Q Not necessarily.
- 20 A Well, I mean, was that a general guestion?
- - A No. I would say "not necessarily".
    - Q Okay. I see. So, one wouldn't look to see, one wouldn't look to what the Company actually paid to

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### [Witness: Petzinger]

determine what would be a forward-looking cost, with respect to discounts?

- There are many instances where a company may not be actively purchasing switching, in which case they may not have any, what I would consider, competitive contracts available. They will -- Some companies don't even use contracts that much. They will go through a process called a "competitive bid process", even if they have a contract in place. That does not necessarily explain what they will actually pay, because they will go to the vendors and say "I'm going to put in these new switches here in, you know, Town A, Town B, Town C. Give me a quote." And, then, they will go to the other vendor and say "give me a quote for these three". And, then, they look, they compare, and then award the bid. So, there's other processes by which switching can be done, besides contracts that are sort of on the books or off the shelf.
- Q Let's address then your comments to Bell Atlantic. Is it your testimony that the discount that should have been used in the SCIS model should have reflected the actual prices in Bell Atlantic's negotiated agreements?
- A Again, not necessarily. The agreements that we're looking at are fairly old. And, the Bell

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#### [Witness: Petzinger]

Atlantic/NYNEX merger has taken place. At least the contracts that were used to justify the filings, both, you know, before and after the stipulation. They're fairly old contracts. They -- And, as I've said, there were other contracts that were provided that indicate substantially different ways in which the prices will end up being lower than what is stated in just the pure discount form listed in the contracts.

- So, then, one should look to the most recent negotiated Q contracts involving Bell Atlantic to determine what the appropriate actual discount is, for purposes of running the SCIS model?
- I would say that absolutely must be taken into account, Α but other things need to be taken into consideration as well.
- And, those other things are?
- Α Things like the merger, how it will impact the buying power of this entity now that will literally be purchasing twice as many switches. They have twice as many switches than either one of the old companies had independently. So, they certainly have much heavier buying power.
- And, assuming that the --
- Α That might be one reason.

1 Q I'm sorry.

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- Α There are others, I'm sure.
  - Assuming that the Commission concludes that the merger savings are offset by future expenses, would it be fair for the Commission to look then, in your view, to the actual prices negotiated in recent contracts?
  - I don't think one has anything to do with the other. Α
  - So, let me direct your attention to Page 14 of Q your testimony then, Ms. Petzinger. Are you with me?
  - Yes, sir. Α
  - On the bottom of the page, and this is not numbered, Mr. Chairman, you've stated, in answer to the last question on the page, "the SCIS/MO and SCIS/IN models contain vendor list prices and require the user to enter a discount for customized and switching investments to reflect the actual prices paid by the local telephone company, according to locally negotiated contracts and/or agreements."
  - Α Okay.
- Did I read that correctly?
- 21 Yes, that's right.
  - And, continuing with that paragraph, you state "Therefore, if the discount factors do not reflect the actual price in Bell Atlantic's negotiated agreements

with switching vendors, the results produced by SCIS will misstate Bell Atlantic switching investments."

Did I read that correctly?

- A Yes, you did.
- Q Thank you.

- A And, what I'd like to explain a little bit more about is that --
- Q Well, let me ask you a question first, before you explain, since I didn't have a question. Is that testimony accurate or inaccurate?
- A I believe it is accurate, based on my definition of "actual". "Actual", in many of the telephone companies, the incumbent telephone companies, use "actual" sort of as a synonym for "historical" or "embedded". My definition and use of the term here would mean "going forward".
- Q Now, I believe you also state, do you not, that TELRIC costs should reflect the costs that an efficient new entrant would face?
- A I'm sorry, could you repeat that? I temporarily blanked out, I'm sorry.
- Q It's your testimony, is it not, that TELRIC costs should reflect the costs that an efficient new entrant would face, is that correct?

#### [Witness: Petzinger]

- A Yes, that's my understanding.
- And, it's also your view, I take it, that inputs used in the SCIS model should be adjusted, in your view, to reflect forward-looking prices that Bell Atlantic can expect to incur, is that correct?
- A Yes, for new switches, that's correct.
- Q Is it for anything else or does it only apply to new switches?
- A No, I think that, because we're talking about the forward-looking costs and -- of Bell Atlantic as the baseline for the process, and that it is attempting to mimic the price or the cost to the new entrant, that the new entrant would presumably face, if they were going into the market buying a new switch, it should be similar. So, I think you have to take the two together, in order to get the right number.
- Q It's all costs, though, that Bell Atlantic can expect to incur in providing the unbundled network element, is that fair?
- A No, I don't agree with that. Because it has to be not just forward-looking, but it has to be cost-efficient.

  I don't believe in reimbursing Bell Atlantic for inefficient practices that would not exist in a competitive marketplace, if this were a competitive

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at's what we're trying to get to here. We're trying to, through a difficult process, but we're trying to make the regulatory process sort of, as much as possible, make this look like a competitive environment.

[Witness: Petzinger]

Fair enough. But the objective, I take it, is to Q attempt to determine, to the extent reasonably possible, the costs that Bell Atlantic will likely face and can expect to incur, considering that you're looking at forward-looking prices?

MR. SALINGER: Objection. Asked and answered.

MR. DEL VECCHIO: I'm not certain that I have and I've heard the answer to that exactly. CHAIRMAN PATCH: Yes. I'll allow

the question.

# BY THE WITNESS:

No, I don't agree at all. For example, the installation factor is a perfect example of what I don't agree with. Bell Atlantic may say they are going to continue to use the in-house expensive process. And, I'm not sure why it is so much more expensive than anyone else in the country, but I don't believe that that is an appropriate forward-looking, efficient cost

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# [Witness: Petzinger]

that should be, you know, moved over for the incumbent LECs to have to pay for.

### BY MR. DEL VECCHIO:

- Q So, in your view, then, the fact that Bell Atlantic will continue to incur those expenses, given its workforce, is irrelevant?
- A I think that has to be the starting place, but where those practices are deemed to be totally inefficient in what would be a competitive marketplace, then they should be modified to be forward-looking, given a competitive marketplace.
- Apart from the fact that you've referenced some default installation factors in the SCIS model, do have specific evidence in New Hampshire, based on the work practices of New Hampshire technicians, that those technicians are inefficient in installing switches, Ms. Petzinger?
- A No. We've received no information or documentation on exactly the process. I understood they were not New Hampshire technicians. I thought they were Bell Atlantic North wide technicians, based on the numbers, I think 500 and some people are dedicated to doing this, as was stated the day before.
- Q Now, directing your attention to Page 24 of your

- testimony. Are you with me?
  - A I'm sorry. Page what?
  - Q Twenty-four.
    - A Yes.

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- It's the first answer in the "Summary", where you state
  "The most grievous error is BA's inputs for switch
  discounts. BA's inputs must be adjusted so that SCIS
  calculates average switch investment per line that is
  comparable to other large RBOCs and reflects the
  forward-looking prices that BA can expect to incur for
  replacement switches." Did I read that correctly?
- A Yes, that's right.
- Q Now, this morning you were testifying at some length about information that was not contained in your direct testimony, isn't that correct?
- A I discussed the stipulation, which was not.
- Q You discussed more than the stipulation, did you not?
- A Can you point me to something specific?
- Q Oh, I think we'll get to some specifics in a moment.

  Why don't we start with an assertion you made that you cannot, and I may have misunderstood you, run SCIS using the melded discount, is that correct?
- A Yes. I think that's an inappropriate use of SCIS.
- Q I see. So, you're saying it's "an inappropriate use",

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#### [Witness: Petzinger]

you're not saying "you can't run SCIS with a melded discount", is that correct?

- A Oh, the model will calculate, that's correct, but it just won't produce reasonable results.
- I see. So, you're claiming then that it should be the complete new discount, and there should be no growth factor reflected at all, and that's what you mean when you say that "you can't do that", which I think were your words exactly, correct?
  - Well, there's two pieces to that. One is, yes, I believe that the new switch price is appropriate, given the TELRIC cost methodology that all the parties have agreed to here. But, in addition, the reason I said "you can't do that" is because you're violating some methodology that is inherent in SCIS. First of all, the fundamental principle that you're buying a brand new switch, at today's prices, with today's equipment. SCIS cannot do growth equipment, and Mr. Baker stated they didn't try to. The only place they have done it is in this sort of unique discounting process that they're doing, that only affects, and might I add, increases the prices, by using growth pricing. But the real reason I said "you can't do that", even more fundamental in violating the general construct of SCIS,

# [Witness: Petzinger]

is that that melding weighting is now being applied to 30 percent of the investment that is known as the fixed cost of the switch. That's the cost that you incur when you first buy the switch. Under no circumstances should that ever receive a melded discount. I don't care what definition or what -- or what melding should this Commission even decide to agree to any melded discount, which I disagree with. If it does, then SCIS has to be manipulated and run multiple times to make sure that the getting started cost never receives the melded discount, that the getting started cost always receives a new switch count.

- Q And, I take it that boils down to, fundamentally -you're disagreeing fundamentally, which would be any
  discount associated with growth at all? You understand
  what Mr. Baker's position is, do you not?
- Yes, I understand his position. However, first of all, we are trying to cost out new switches. Second of all, growth equipment was not included anywhere in this cost study. The only place they're attempting to include the concept of growth is in the pricing, in order to increase the prices. I just don't think that's appropriate. You can't do -- you can't selectively decide to include the impacts of growth in just one

### [Witness: Petzinger]

area. Should you decide to do a life cycle analysis, taking into account the initial cost and all of the growth over the life of the switch, then you should have had ten years worth of demand in that cost study. And that fixed getting started cost should have been divided over the ultimate demand, not just current demand. So, you can't selectively choose where to include growth and where to exclude it. It's inappropriate to include it here, because it opportunely increases the cost.

- Q I see. So, it's your testimony then that the utilization factors that have been used in these studies don't reflect growth?
- A Based on my analysis of the fill factors here, I would say they certainly do not allow for a lifetime of growth in that switch.
- Q A "lifetime of growth", but they do reflect growth?
- A There may be some very small amount. A 95 percent fill factor or a 98 percent fill factor, depending on local conditions, is the general industry standard for what they call "administrative fill".
- Q And, what about if the studies actually reflect a 70 percent growth factor? Would that reflect growth?
- A Not necessarily. I suspect that what that represents

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# [Witness: Petzinger]

is the lumpiness of the capacities in the way the engineering occurs, is that, in effect, that's a function of the engineering in the components in the way they're purchased. Not necessarily growth.

- Q And, what about the utilization factors in interoffice facilities, for example? That doesn't reflect growth?
- A I don't know about the interoffice facility study.
- Q So, you're not confident to testify as to any utilization factors with respect to any other elements, is that correct?
- A No. I am not --

MR. SALINGER: Objection. Mr. Chairman, this witness is only here to testify on the switching element, and it's not appropriate to be asking her about other elements.

MR. DEL VECCHIO: It's appropriate to determine the scope of her knowledge, Mr. Chairman.

CHAIRMAN PATCH: Yes. I think it's an appropriate question. She can answer it, and she can tell us what she is here for.

## CONTINUED BY THE WITNESS:

A No, I did not look at any of the other cost studies, only the switching study. That's the only one I'm familiar with.

BY MR. DEL VECCHIO:

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- At one point in your direct you talked about only one vendor having a certain discount rate. Were you referring to Nortel?
- I don't think I said that.
- I know you didn't say "Nortel". I'm asking you whether you did. You specifically said "only one vendor", and I'm trying to understand what you were referring to?
- I think you're referring to some testimony that I Α mentioned where one of -- there is a vendor that has a different structure contract that is a flat rate price per line. I did not say that it was a different discount.
- Q I see. And, what vendor is that, by the way?
- I'm not sure that's -- I was under the impression that was considered proprietary.
- That's fine. Are you familiar with the embedded cost 0 of switching in New Hampshire?
- Α Only as far as Mr. Baker presented yesterday.
- Q On a per line basis statewide, what's the average?
- I only know from that sample that Mr. Baker -- I do not Α know what the statewide average would be.
- Q Will you accept subject to check that the statewide average is approximately \$380?

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### [Witness: Petzinger]

MR. SALINGER: Objection, Mr.

This witness shouldn't be asked to accept that, Chairman. if she has no familiarity with it, subject to check. has no capacity to check it.

MR. DEL VECCHIO: I don't know about that, Mr. Chairman. We've given them a substantial amount of information. And, I believe that any checking would confirm that number.

MR. SALINGER: Mr. Chairman, --

CHAIRMAN PATCH: I think it's up to the witness to decide whether she's willing to accept it subject to check, and not her lawyer. She probably won't, now that you've raised it.

#### BY THE WITNESS:

To be honest, I have not seen, I am not aware of embedded cost data provided by Bell Atlantic in this proceeding. If it was there, I'm not aware of it, because that, to me, is a totally irrelevant aspect. So, if it exists, I didn't look at it and don't know if I have it. So, I just don't think I can accept it.

#### BY MR. DEL VECCHIO:

- Have you considered embedded costs in any state?
- 23 Α No.
  - 0 Are you familiar with embedded switching costs in any

[Witness: Petzinger]

states? 1 2 Α No. So, you're only familiar with vendor pricing in the 3 Bell Atlantic states, and that's it, and no embedded 4 5 costs? Embedded costs is a -- I don't know how to explain it, 6 Α but within both the local telephone companies, and when 7 I was at Bellcore building cost models, embedded cost analysis is a totally different -- sometimes it's a 9 different organization, and there is no -- their paths 10 11 They're doing two totally different don't meet. 12 things. So, forward-looking costs never looks at accounting data. It's just not anything I've ever 13 14 really been involved with to any great degree. 15 Then, you're not generally familiar with accounting 0 16 data then? 17 Α Not -- You'd have to be more specific as to where 18 you're going. 19 I'm simply following up on what you just said, ma'am. No, I'm not, I'm not very -- I took an accounting 20 Α 21 course in MBA school. But that's about it. 22 Q Well, I think we have another similarity then. don't think that that would qualify you, as you would 23

{DE 97-171} [Track 2 - Day III] (9-03-98)

admit, to being an accounting expert, is that correct?

1	A No, absolutely not. I'll stick with forward-looking.						
2	Q Now, you were commenting about Exhibit 87, I believe						
3	earlier, and stating that old prices were used, and						
4	you're referring to '92 prices reflected in Exhibit 76,						
5	which AT&T actually, I believe, introduced, is that						
6	correct?						
7 8	A Well, I'm sorry, I've lost my what is 87? I have 76.						
9	(Atty. Del Vecchio showing document						
10	to the Witness.)						
11	THE WITNESS: Oh, okay. I'm sorry,						
12	could you repeat the question now?						
13	MR. DEL VECCHIO: Sure.						
14	BY MR. DEL VECCHIO:						
15	Q Exhibit 87 reflects data set forth originally on						
16	Exhibit 76, which AT&T introduced, correct?						
17	A Yes, that's right.						
18	Q And, the old data you're referring to are the most						
19	recent dial-with-dial conversions experienced in New						
20	Hampshire for the remote switches, is that right? And						
21	stand-alones, for that matter?						
22	A You're asking me "do these represent the 25 most						
23	recent?"						
24	Q No. I'm asking you whether, when you characterized the						

- numbers as "old data", you were referring to the most recent conversions in New Hampshire?
  - A I was characterizing the fact that 1992, I don't think in anybody's book, can be considered current. I wasn't necessarily comparing them to anything else at all.
  - Q But they -- you understand, I believe, that these are the most recent conversions, correct, in New Hampshire?
  - A Well, yes. That's what you're telling us, yes.
  - Q And, you have no reason to disbelieve that, do you?
- A No.

- Now, referring to Exhibit 87, where you were commenting that the old data should actually be less, you understand, do you not, that the data taken from Exhibit 76 was subject to a discount adjustment, to reflect the weighted discount used as an input to the stipulation, is that correct?
- A I will be honest, that I was reviewing that again this morning, and I don't completely understand. Are you talking about 2(b), where that adjustment was made?
- Q Correct.
- A I must admit, I do not completely understand what that was -- what was happening there.
- Q Fair enough. Now, let's move on to a comment you made about the network that's deployed in New Hampshire, and

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[Witness: Petzinger] I would thank you on behalf of our company, I believe 1 you stated that "this is a very efficient deployment of 2 3 switching equipment", is that correct? I'm not sure I said "very", but it's definitely --4 Α 5 I wrote down --6 -- a very reasonably efficient. 7 And, that's because the host/remote cluster situation, Q particularly, given the demographics of New Hampshire, make a lot of sense, is that correct? 9 10 Α That's correct.

- And, you don't expect, do you, or have any evidence to support the notion that the Company would likely incur less expense, were it to reconstruct its network, do you?
- A Not necessarily. But I don't think that's what we're trying to do here anyway. I mean, the idea is, although it's a little bizarre when you first think about it, but we are not necessarily looking at the embedded network. The idea is "what is the forward-looking cost-efficient network?"
- Q Which, in this case, I think you testified, matches very nicely to the existing Bell Atlantic switching network, is that correct?
- A Yes. I would say that the New Hampshire network does

# [Witness: Petzinger]

appear to be cost-effective, given today's. The only thing I did find unusual, which is not part of the host/remote issue, is the limitation to only one switch manufacturer.

- Q Now, you stated also earlier, I believe, that the Bell Atlantic states in the south, which I believe Mr. Baker also stated, uses vendor installation, correct?
- A Yes, that's correct.
- And, you also stated, though, that you're not familiar generally with embedded costs. Do you know what the embedded costs are for vendor installation in the Bell Atlantic South states?
- A No. You're talking about absolute dollars?
- 14 Q Correct.
- 15 | A No, not at all.
  - You also testified, I believe, that you applied a "toggle switch". I must confess the toggle switches I use probably aren't the toggle switches that you used in the SCIS model. But you, in fact, simply replaced the installation factor, when you -- that is you used a default installation factor, when you exercised the toggle switch?
  - A No, not quite.
  - Q Okay.

# [Witness: Petzinger]

A	I can explain what that is. The toggle switch is truly
	in a Windows environment, the same as the manual toggle
	switch. You know, you click on one button or the
	other. One says a "Material Only Run" and one says
	"Engineering" "EF&I", Engineered, Furnished and
	Installed, in this case, Bell local telephone
	company engineering and installation is not included.  That means the vendor's engineering and installation
	costs. So, I you can only choose one or the other,
	so I clicked on the "Engineering, Furnished and
	Installed", and then simply recalc'd.
0	And. I take it we would agree that the default

- And, I take it we would agree that the default installation factor does not reflect the actual expense Bell Atlantic will incur next year or the year after or the year after, given its current workforce?
- A Is this in relation to the things I did in SCIS or are you on a new question? I'm having trouble following the flow.
- Q It was a new question.
- A Okay. I am not familiar with Bell Atlantic's labor issues.
- Q So, you can't answer that question?
- 23 | A No.
  - Q You also stated that you reran the SCIS model

#### [Witness: Petzinger]

essentially seeking to replicate what Bell Atlantic did, is that correct?

- I did two -- First, what I did was I simply viewed the results that were provided in the SCIS electronic version they gave me, without replicating anything. I simply opened it up and looked. And, the results, the total number didn't match any of the numbers that I could find in the workpapers. And, then, what I did was, assuming that maybe it needed to be calculated again, I just pushed the "recalculation" button, and it generated a different number, but it still was not a number that matched anything.
- Q And, the number, I think you stated, was approximately \$146?
- A Per line.
- O Per line.
- A Yes. So, the actual result that SCIS generates is a total number, similar to the total number at the top of this Exhibit 62 page we keep referring to. And, the actual -- the actual investment, when I recalc'd, was, instead of 127.4, was 114.2 --
- Q I see.
- 23 | A -- million.
  - Q So, it's approximately \$13 million. Which, by the way,

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A The ISDN investment is wrong.					
Q I wasn't asking you whether it was right or wrong. I					
was asking you whether the so-called missing 13 million					
dollars, when you recalculated SCIS, seems to					
correspond to the \$13 million approximately of ISDN investment?					
A I don't know. I don't have that piece of paper with					
${\tt me.}$					
Q You don't know one way or the other?					
A No, I'm not sure what the ISDN number was, the final					
result number was.					
MR. DEL VECCHIO: See if I have					
something more here.					
BY MR. DEL VECCHIO:					
Q I'd like to turn your attention, if I could, or I'd					
like to ask you to turn your attention to the					
stipulation. Do you have a copy of that?					
A No, I don't.					
MR. DEL VECCHIO: Have an extra					
copy?					
(Atty. Salinger handing document to					
the Witness)					
(DE 97-171) [Track 2 - Day III] (9-03-98)					

[Witness: Petzinger]

Atlantic incorporated, is that correct?

corresponds to the amount of ISDN investment that Bell

### BY MR. DEL VECCHIO:

- Q And, I'm sorry, does that version have the attachments?
- 3 A It appears to, yes.
  - Q Can you direct your attention please to Attachment 1?
- 5 A Yes.

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Q And, that's labeled "Local Switching Costs End Office".

Okay. Now, I think you had some complementary things

to say about the degree to which the switching costs
under the stipulation varied from the original proposal

by Bell Atlantic, noting, of course, your further

argument that those costs were too high, is that fair?

- A Yes, the complement was in the same way that I'd pay only \$25,000 for a ten year old Chevy, as opposed to \$50,000.
- Q I see. So, as you said earlier, you're really a forward-looking expert, not an embedded cost expert, correct?
- A Yes, that's correct.
- Q So, therefore, one would assume that you'd be familiar with forward-looking costs in other states, correct?
- A Before we go too far down this road, I am an expert in investment, not in the ultimate cost.
- Q So, you have no idea then of the relationship between the costs, for example, set forth on Attachment 1 of

Exhibit 61 to investment?

- A Yes. I have a general understanding of how it equates to investment, yes. But there's lots of steps that occur after the investment, including, you know, depreciation and capital cost, and all kinds of things that I know very little about, actually.
- Q Fair enough. Focussing, though, on the bottom line, if you will. If you direct your attention to the "Total" column, which is "F=C+D+E".
- A Yes.

- Q Are you with me?
- A Yes.
  - Q Isn't it true that these numbers are substantially lower than TELRIC compliant long run costs adopted in, for example, Massachusetts?
  - A I have absolutely no knowledge of Massachusetts, I'm sorry.
  - Q Isn't it true that these numbers are substantially less than TELRIC compliant forward-looking costs adopted in almost any other Bell Atlantic state? Or, do you have no knowledge of that as well?
  - A I have not worked in any of the Bell Atlantic states, nor for South, except for in New York recently, but that was after the initial rates were set. If I

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remember, t	hey ar	e lower	than	that,	but	I car	ı't be	sure
whether all	of th	ese are	lower	c. I	just	don't	remen	mber.
I was there	to do	what t	hey ca	alled	a "Pl	nase 3	Study	Z",

and we were not.

Certain of these rates, though, look lower than even 0 those adopted in New York, is that correct?

[Witness: Petzinger]

- Some of the -- The analog port rate does look -- does look lower, but I'm not -- I cannot be certain of that.
- Let me see if I can summarize this. Do you have any evidence to support the contention that there are higher switching costs adopted by Commissions in the Bell Atlantic region, pursuant to TELRIC compliant forward-looking cost studies, than those set forth on Attachment 1? Do you have any evidence to support that?
- As I said, I'm not familiar with anything in Bell Atlantic.

MR. DEL VECCHIO: Thank you. Mr. Chairman. Nothing further at this time.

CHAIRMAN PATCH: Ms. Jackson, do you have any questions?

MS. JACKSON: Staff has no questions of this witness.

CHAIRMAN PATCH: Mr. Homeyer?

MR. HOMEYER: No questions.

CHAIRMAN PATCH: Mr. Salinger, do

you have anything you wish to --

MR. SALINGER: Three points to

clarify.

18.

### REDIRECT EXAMINATION

### BY MR. SALINGER:

- At the outset of Mr. Del Vecchio's cross-examination, he pressed you repeatedly on the notion that SCIS can produce forward-looking costs. I take it that you were trying to emphasize that the inputs here are key, that SCIS is not a useful costing tool, if it's based on inputs that are not reasonable and are not forward-looking?
- Exactly. As with any model, and I don't know if you've ever heard the term, but "garbage in, garbage out". If the inputs are not relevant to what you are studying, and in this case it should be the forward-looking, efficient cost of switches generally available, then the outputs will not reflect that.
- Q Mr. Del Vecchio was also asking you about the relevance of the most recent prices for switching available to Bell Atlantic. You emphasized that it was also important for the Commission to take into account the

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### [Witness: Petzinger]

effect of the Bell Atlantic/NYNEX merger and on its forward-looking switch prices. Can you explain what you meant by that?

When a merger of this magnitude takes place, the effective buying power of going to these vendors and saying "Okay, I want you to give me a price for "X" number of switches", they can now say "I want to spread the number of switches over the entire Bell Atlantic North and South territory." They're potentially doubling the number of switches they will be purchasing when they go into negotiations. That gives you the ability to radically have more buying power and extract more favorable terms.

In addition, I know the Bell Atlantic merger has stated, they expect millions, hundreds of millions of dollars in investment savings. Some of that has to come from switching. I can't imagine it was all expected to be from other parts of the network.

Switching has to be a part of that. But yet we have seen no adjustments whatsoever to account for this.

And, in your prefiled testimony, as well as the opening summary you gave of that this morning, you emphasized the importance of the Commission looking not just at Bell Atlantic switch prices, but at what other

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### [Witness: Petzinger]

telephone companies have managed to pay. And, you, for example, discussed the Gabel study results in the NRRI paper, and you also discussed the other RBOC data in your prefiled testimony. And, could you just explain again why those other indicia of what might be reasonable forward-looking switch costs are important here?

I mean, those represent newer numbers, and reflect the downward trend of switching prices that is relatively universally accepted. And, none of those numbers in my testimony do I necessarily advocate as being the one right number. I was just trying to give some range and benchmarks of what should be considered in the process of "what is the forward-looking cost of switching?" To look at just New Hampshire isn't really enough, because Bell Atlantic will be purchasing their switching Bell Atlantic wide. They don't go out and just buy -- purchases a separate contract for New Hampshire. These contracts are for all of Bell Atlantic, as are the other large RBOCs that can, you know, generate these kinds of aggressive purchasing behavior.

The other situation, too, is there are terms and conditions in the contracts that do relate to what else is going on in the marketplace outside of Bell

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#### [Witness: Petzinger]

Atlantic. And, those should be taken into account. And, finally, in your prefiled testimony, as well as 0 your opening statement this morning, you explained it with some care why it is that the more than 50 percent installation factor of Bell Atlantic was excessive. Mr. Del Vecchio followed up on that and asked you whether use of a lower installation factor would mean that Bell Atlantic might not recover actual costs of its current labor force going forward. Could you explain whether that consideration is relevant and why? Well, again, I think the number that makes sense to me, Α based on what we know, is about a 20 percent installation factor. That represents to me what is Bell Atlantic South's current cost of installing and engineering switches, both including the vendor installation and including their own local telephone company installation. With the merger going forward, it is entirely appropriate to expect Bell Atlantic, as a corporation, to try to take the best practices from the two different companies and make them effective across the whole company, as was mentioned earlier by I think it was Mr. Baker, regarding some guidelines about how they do right to use fees, he said that, you know, "NYNEX did it one way, and that has been now spread

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#### [Witness: Petzinger]

across all of the Bell Atlantic territories." So, we've already seen evidence that Bell Atlantic is trying to run its company as a merged entity, and that high cost, inefficient ways of doing things will be weeded out going forward. That, to me, would be their objective, and mandatorily so.

#### BY CHAIRMAN PATCH:

- Q Are they limited, you know, if you talk about it in the context of the installation factor, are they limited by labor agreements, do you think?
- A That's always a possibility. But, again, in a long run cost study, since I don't know what the labor agreements are --
- Q Though, shouldn't we take into that into consideration?

  I mean, isn't there an element of realism that has to come into this?
- A You're asking a difficult question. And, you're right.

  I think there is some realism. But we also have to assume that, not only may there be labor increases, but, first of all, from a pure realist's perspective, those should be offset by productivity gains. The other side of the coin is that, if you include all of the incumbent's hindrances that are associated with their current way of doing business, because of the

# (Witness: Petzinger)

historical evolution of the business, then what's going to happen is the costs are going to come out too high. And, the new entrants are simply not going to be able to compete, because we will not be able to stand those kinds of prices. Yes, the ideal situation is we would be able to bypass the unbundled network element and put in our own facilities. But you can't do that everywhere all in one fell swoop. So, until we can get those facilities in, we have to be looking at alternative ways of competing effectively. And, the price we pay for the unbundled network elements should be somewhat comparable to what the new entrants are going to face when they go in.

It's a tough situation. And, to be honest, I think it's more of a question for Mr. Siwek, who will be able to answer it from an economist's perspective, because that's really an economics question.

MR. SALINGER: I have nothing

further.

CHAIRMAN PATCH: Okay. Any other questions? Mr. Del Vecchio.

MR. DEL VECCHIO: Two questions.

# RECROSS-EXAMINATION

BY MR. DEL VECCHIO:

#### [Witness: Petzinger]

Q First, Ms. Petzinger, is it correct that all of the switches in New Hampshire are currently digital switches?

MR. SALINGER: Objection. That's outside the scope of the redirect.

MR. DEL VECCHIO: Not at all, Mr. Chairman. We were talking about issues of the kinds of costs we're likely to incur and the reliance on recent pricing. And, I think it's important just to establish a fact that --

 $\label{eq:CHAIRMAN PATCH: I'd like to hear}$  the answer to the question.

#### BY THE WITNESS:

A The only thing I know is what either Mr. Baker or Mr. Bradley said yesterday, and they indicated that they were. But I don't have any direct knowledge of that.

# BY MR. DEL VECCHIO:

- Q And, is it true that a digital switch has an average life of over ten years?
- A I -- You're going to get into an area here that gets really complicated with depreciation and all kinds of stuff. And it's -- you have to explain to me what you mean by "life" in this context?
- Q Well, is depreciation --

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some time.

# [Witness: Petzinger]

- 1 Α Because it's confusing. Is depreciation an element that goes into the costing 2 of switches in a forward-looking study? 3 As far as I know, it does, but I'm definitely not an 5 expert in that area. So, you're not familiar with all the cost inputs that 6 7 would apply to the costing of switching equipment in a forward-looking study? 8 Α No, I mentioned earlier that I know nothing about how 9 this capital costs or depreciation or any of those 10 postinvestment kinds of things are done. 11 I don't have any -- I don't have any expertise in those kinds of 12 13 issues. I see. So, you have no information which would suggest 14 that a digital switch lasts less than ten years, would 15 16 you? As far as I know, again, it depends on how you 17 Α 18 define it. There are equipment components that age and 19 are changed out. But if you say that there is going to 20 be a digital switch that was placed, some of them were placed in the early '80s, I have every reason to expect 21
  - Q And, those that were placed in 1992 or 1996 will be

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that they're still there, and will be there for quite

# [Witness: Petzinger] 1 there for quite some time as well, fair enough? I would say that now you're -- the numbers might, you 2 Α know, might be coming down slightly from, yes, the 20 3 4 years that we're talking about. 5 Q To ten or above? 6 I just don't know. 7 0 Okay. You're asking me to project what technology replacement 8 Α and obsolescence, and I just am not an expert in that. 9 10 I don't know that. 11 MR. DEL VECCHIO: Very good. Thank 12 you, Mr. Chairman. 13 CHAIRMAN PATCH: Any other 14 questions? 15 MR. SALINGER: No. 16 CHAIRMAN PATCH: Thank you for your 17 testimony. 18 MS. JACKSON: May I ask a question 19 on -- for recross? 20 CHAIRMAN PATCH: Sure. 21 RECROSS-EXAMINATION 22 BY MS. JACKSON: 23 Ms. Petzinger, if an incumbent, as you stated just a moment ago, if an incumbent is hindered by high costs, 24

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### [Witness: Petzinger]

due to its unique labor contracts that we were talking about, wouldn't that suggest that a competitor would have an opportunity to perform that function less expensively, not being subject to that contract? I'm assuming that that's -- that is a possibility.

MS. JACKSON: Okay. Thank you.

CHAIRMAN PATCH: Thank you. As I

understand it then, we have next the AT&T panel, is that right?

MR. SALINGER: Yes, Mr. Siwek and Mr. Wells. And, we also just have a housekeeping matter, the rebuttal testimony of Mr. Globerson. The parties have stipulated that, since nobody has any cross-examination of Mr. Globerson, he needn't appear. But I'd like to have his testimony marked as the next exhibit for the record please.

> CHAIRMAN PATCH: And that's 90? THE CLERK: Ninety.

CHAIRMAN PATCH: Exhibit Number 90. (The document, as described, was herewith marked as Exhibit 90 for identification.)

(Whereupon Stephen E. Siwek and James W. Wells, Jr., were duly sworn and cautioned by the Court